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Cech et al.

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(54) **TELOMERASE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(52) U.S. Cl. **435/325; 435/320.1; 435/7.1; 435/7.2; 530/324; 530/350; 514/2; 536/23.2; 536/23.5**

(58) Field of Search **435/6, 7.23, 325, 435/320.1, 7.1, 7.2; 530/324, 350; 514/2; 536/23.2, 23.5**

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(57) ABSTRACT

The present invention is directed to telomerase nucleic acids and amino acids. In particular, the present invention is directed to nucleic acid and amino acid sequences encoding various telomerase protein subunits and motifs, including the 123 kDa and 43 kDa telomerase protein subunits of *Euplotes aediculatus*, and related sequences from *Schizosaccharomyces*, *Saccharomyces* sequences, and human telomerase. The present invention is also directed to polypeptides comprising these telomerase protein subunits, as well as functional polypeptides and ribonucleoproteins that contain these subunits.

12 Claims, 81 Drawing Sheets